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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/065,576	10/31/2002	Jeffrey Thomas Remillard	202-1293	9752
46535	7590	09/22/2005	EXAMINER	
BIR LAW, PLC/FGTL 45094 MIDDLEBURY COURT CANTON, MI 48188-3215			TSAI, CAROL S W	
			ART UNIT	PAPER NUMBER
			2857	

DATE MAILED: 09/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/065,576

Applicant(s)

REMILLARD ET AL.

Examiner

Carol S. Tsai

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 31 March 2005.  
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,2,5,6 and 11-26 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1,2,5,6 and 11-23 is/are rejected.  
7) ☒ Claim(s) 24-26 is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_.  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_.

### DETAILED ACTION

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

#### *Claim Rejections - 35 USC § 102*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 2, 5, 11, 13, 17-23 are rejected under 35 U.S.C. 102(b) as being anticipated by U. S. Patent No. 5,388,048 to Yavnayi et al.

With respect to claims 1, 2, 5, 11, 13, 17-23, Yavnayi et al. disclose a system for detecting an object, comprising: a light source (laser diode optics 21 shown on Fig. 1) generating a light pulse, said light pulse being emitted (see col. 4, lines 21-22); a light detector (optical detector 22 shown on Fig.1) configured to receive a reflection of said pulse (see col. 4, lines 21-24); and, a controller (micro-controller 13 shown on Fig.1) operably connected to said light source and said detector, said controller configured to indicate a presence of the object from said received light pulse, said controller further configured to adjust sensitivity for detecting the object based on an elapsed time from said emission (see col. 4, lines 21-46; col. 5, line 49 to col. 6, line 25; col. 7, lines 7-41; and col. 10, lines 33-40).

Yavnayi et al. do not disclose expressly a computer storage medium having a computer program encoded.

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It is, however, considered inherent that Yavnayi et al. disclose a computer storage medium having a computer program encoded (see col. 4, lines 38-46 and col. 4, line 59 to col. 5, line 9 and col. 8, lines 61-66), because such element is known to be necessary in order that the distance of the vehicle from a leading vehicle can be constantly calculated and sampled at predetermined time intervals and the closing velocity of the vehicle with respect to the leading vehicle also can be calculated.

*Claim Rejections - 35 USC § 103*

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 6, 12, and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yavnayi et al. in view of U. S. Publication 2003/0222772 to Laufer.

With respect to claims 6, 12, and 14, Yavnayi et al. disclose transmitting said light pulse to a light reflector and reflecting said light (see col. 4, lines 20-21).

Yavnayi et al. does not disclose the reflector being a polymeric light reflector.

Laufer teaches the reflector being a polymeric light reflector (see paragraph 0009).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Yavnayi et al.'s method to include the reflector being a polymeric light reflector, as taught by Laufer, in order to essentially isolate signals transmitted/received

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from environment lights, so as to minimize distortion of the signals (see Laufer, lines 3-6 of paragraph 0009).

6. Claims 15 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yavnayi et al. in view of JP 05297141 to Azusazawa et al.

As noted above, with respect to claims 15 and 16, Yavnayi et al. disclose the claimed invention, except for a near infrared diode laser/a near infrared light detector.

Azusazawa et al. teach a near infrared diode laser/a near infrared light detector (see Constitution, lines 1-8).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Yavnayi et al.'s method to include a near infrared diode laser/a near infrared light detector, as taught by Azusazawa et al., in order that highly precise distance information by recognizing the image information obtained by a pick-up means, and emitting the reflected light of the light beam projected toward an object can be provided (see Azusazawa et al., Purpose, lines 2-4).

***Allowable Subject Matter***

7. Claims 24-26 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

*Response to Arguments*

8. Applicant's arguments filed August 3, 2005 have been fully considered but they are not persuasive.

Applicants argue that Yavnayi et al. do not disclose or suggest multiplying the received signal by a gain that increases based on elapsed time from emission in order to solve the problem of detecting relatively distant object in addition to close objects while having acceptable performance in the presence of adverse environmental conditions including fog or dust, for example. The Examiner disagrees with Applicants. The examiner interprets the claimed language differently from Applicant. As set forth above in the art rejection, Yavnayi et al. do disclose multiplying the received signal by a gain that increases based on elapsed time from emission (see col. 7, lines 7-42; by selecting suitable values for the first and second resistors 67 and 67', respectively, the sensitivity of the rangefinder receiver may be increased or decreased. This is particularly useful for increasing the sensitivity of the device in adverse weather conditions, such as fog, when visibility is low so that detection of weak reflections over small distances may be effected).

*Conclusion*

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after

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the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

*Contact Information*

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Carol S. W. Tsai whose telephone number is (571) 272-2224. The examiner can normally be reached on Monday-Friday from 8:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marc S. Hoff can be reached on (571) 272-2216. The fax number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 886-217-9197 (toll-free).

cswt  
September 13, 2005



Carol S. W. Tsai  
Primary Examiner  
Art Unit 2857